THE ETHICS OF OPERATIONS IN SURGERY

AN ADDRESS

WILLIAM H. BENNETT

[*With the Author's Compliments.*

An Address

ENTITLED

SOME REFLECTIONS, MAINLY ETHICAL, ON THE PRESENT POSITION OF OPERATIONS IN THE PRACTICE OF SURGERY.

BEING THE ANNUAL ORATION OF THE MEDICAL SOCIETY OF LONDON,

DELIVERED ON MAY 18TH, 1903,

BY SIR WILLIAM H. BENNETT, K.C.V.O., F.R.C.S. ENG.,

SENIOR SURGEON, ST. GEORGE'S HOSPITAL, ETC.

Reprinted, after revision, from THE LANCET of May 23, 1903.

LONDON:
HARRISON AND SONS, ST. MARTIN'S LANE,
PRINTERS IN ORDINARY TO HIS MAJESTY.

1903.

An Address

ENTITLED

SOME REFLECTIONS, MAINLY ETHICAL, ON THE PRESENT POSITION OF OPERATIONS IN THE PRACTICE OF SURGERY.

Being the Annual Oration of the Medical Society of London, delivered on May 18th, 1903.

By Sir WILLIAM H. BENNETT, K.C.V.O., F.R.C.S. Eng.,

SENIOR SURGEON, ST. GEORGE'S HOSPITAL, ETC.

Mr. President and Gentlemen,—My first duty is to tender to you, Sir, and to the council of the society my thanks for the compliment which it has been thought right to pay me in the invitation to deliver your annual oration. I must at once confess that I have only been induced to place myself in a position which is so much beyond my province by the feeling that it would be ungracious to decline an invitation which conveys so much.

I am sure that I am right in saying that only those whose experience extends backwards beyond

the time when the great work of Lister was made known and its influence upon the work of surgeons generally became manifest, can in any degree truly realise the enormous changes—I might almost say miraculous changes—which followed in the practice of surgery. I am therefore thankful that my medical education commenced before the Listerian era, which, after all, is not so many years ago—a time when septic diseases, like erysipelas, cellulitis, osteomyelitis, and kindred conditions, were common consequences of operations, and formed a large proportion of hospital work—a time when the salvation of the patient and the reputation of the surgeon not infrequently depended upon the appearance of the pus which was called laudable—a time at which the author of one of the most successful text-books of the day took the opportunity of congratulating his readers that the science of surgery had advanced so far that but little further progress could be looked for, and when one of the foremost surgeons in London chose as the subject of his presidential address at the Clinical Society, "Pyæmia in Private Practice," and gave many cases in illustration. The practice of surgery in times like those, when the main object was the avoidance of operations because the results were so often disastrous, and when an uncomplicated progress after operation was generally

the exception, necessitated an amount of consideration in deciding upon the radical treatment of a case and an alertness in watching and dealing with the subsequent complications which cannot be appreciated by those whose experience has commenced in later times. The complete realisation of the fact that, thanks to Lister's labours, operations could be performed with comparative safety, naturally not only led to the radical treatment of many conditions which hitherto had been allowed to end fatally without any rational attempt to obviate such a result, but ushered in the treatment by operation of innumerable conditions which, whilst not endangering life, were the cause of so much disability in many individuals as materially to diminish the aggregate usefulness of the general community. And as the confidence in the safety of operative methods grew with surgeons generally, the treatment of certain conditions, in themselves harmless at first but possessing potentialities for evil later, became common, and so arose the class of operation which may be called preventive. Finally, there came the utilisation of operations for diagnostic purposes—for example, the opening up and inspection of the abdominal, thoracic, and cranial cavities, leading ultimately to the

Apotheosis of the Exploratory Operation.

The promise of such enormous benefits from operative treatment which could be used with comparatively small risk was followed by an amount of energy and enthusiasm in the direction of this radical form of treatment and in the invention of operations, which came at one time perilously near to the limits of reason and there seemed a danger that the operation influence would reach to the dignity of an obsession—a condition of things which hardly tended to the best interests of surgery. The pendulum has in due course commenced its backward swing and a position has now been reached from which the rational bearings of surgical operations generally may be considered in relation to the risks which they entail, the benefits which are derivable from them, and the limits which legitimately control their application.

In what follows it must be understood that I have little desire to influence and still less to teach; that I am merely giving views and describing impressions which are those of one who during an experience which extends from the time just before the commencement of the period of surgical cleanliness has been carefully watching the progress and general trend of surgical affairs and who, I have reason to believe, enjoys a fair share of operating work in London at the present time and so may

be allowed to have some knowledge of the failures as well as of the successes which are necessarily associated with a rather large experience. Speaking generally, I am compelled to say that it seems to me that the tendency towards operative measures, although less than it was a few years since, is still, on the whole, too strong, and that operations are yet approached in too light a spirit, not for the reasons to which I have already referred, but because a prolonged familiarity with them has led to an under-estimation of the risks which they entail and to a forgetfulness of the defective results which, more often than is commonly thought, follow upon them. I am further bound to feel that the present position of things tends far too much to the reduction of the surgeon to the position of the mere mechanic. Indeed, it is not long ago that a surgeon is reported to have said that he considered himself nothing much better than a good carpenter—a statement which was, if I may be respectfully allowed to say so, a greater tribute to his modesty than to his sense of appreciation of the realities of his profession.

The Four Stages of Surgical Life.

The working life of every surgeon may, I venture to think, be divided into three principal stages. In

the first, or developmental, stage, the fascination and apparent simplicity of the operative treatment, presenting, as it seems to do, the prospect of a ready road to immediate and conclusive results, are apt to obscure wider and often more important issues in the way that a penny piece, if placed sufficiently near the eye will obscure the sun. Towards the end of this stage those whose sense of infallibility is not too strong begin, I fancy, to realise the truth of what may be expressed by an ancient classical adage, slightly modified : *Nemo repente fit chirurgus.* At about this time in the evolution of the surgeon the tendency shown rather later to operate less freely and apparently with less energy sometimes leads to the conclusion by those who are yet in the early stage of their development that this is due either to indifference or to an inability to keep abreast of the times, the real factor in the matter, which is the dictate of increasing experience, being overlooked.

In the second stage, the gathering of experience and the lessons of some failures and disappointments lead in the majority of men to maturer judgment and a better understanding of the proper relation of things. It is towards the end of this period that the greater number of surgeons begin to be rather less aggressive in the direction of the purely operative treatment and show indications of approaching

it with more consideration than hitherto, an attitude which is the result, as I have already said, of increased experience and a more accurate knowledge of the real value of operations as such. It is at this time that a sober retrospect on the part of those whose sense of proportion is sound, will, I am confident, recall to mind more instances than one in which an operation performed in all good faith had better, for the good of the patient, and perhaps for the reputation of the operator, have been left alone.

With the third stage comes the inclination for the surgeon to confine himself to certain operations with which he feels himself most at home and thus to some extent his practice becomes eclectic. The increase of experience and a maturer judgment at the same time becoming more prominent characteristics, he is enabled to exert a far-reaching influence of the greatest value.

There is a fourth stage, of course, in the surgeon's life when, happy in the contemplation of an honourable career well spent and perhaps full of honours, it is to be hoped that he has much money at the bank—a time when, although operations may be things of the past, there remains that never-failing judgment, the outcome of a vast experience the importance of which it is impossible to over-estimate, although I

fear at times it is not altogether appreciated at its full worth by some of us.

Operation Risks in Mortal Cases.

I presume that it cannot seriously be contended that any operation can be made absolutely safe, even if it be assumed that the operator is as perfect as an operator can be, for apart from merely accidental risks some account must be taken of the effects of the anæsthetic, the constitutional peculiarities of the patient, the circumstances in which the operation is performed, and the qualities of those who assist in its completion. The risk incurred may be an immediate danger to life, it may be a possibility of leaving a worse condition than existed before the operation, or it may be merely the chance of defective results.

With regard to the danger to life, apart from certain accidental risks which must be connected with all operations, it is clear that in any mortal condition which seems susceptible to relief by operation no risk is too great to run provided that there is a real chance of success, but I do not think that the mere fact that a patient is apparently bound to die unless operated upon is in itself a justification for operation; and operations upon moribund

and on semi-pulseless people, save in very exceptional circumstances, seem to me to be mischievous and unscientific, since they cannot, from the nature of things, benefit the patient and they reflect but poorly upon the practice of surgery. The amount of risk which can be justifiably run in these mortal cases depends greatly upon the question as to whether the lesion is due to curable—that is, probably non-malignant—conditions or whether it is caused by malignant disease or by some other incurable state. It is obvious, I suppose, that there is practically no limit, as I have already said, to the risk which may be run in dealing with a curable condition, whilst in a case of malignant disease, for example, in which the operation may, as a rule, be regarded as palliative, grave consideration should be given to the question of risk before embarking upon a treatment which at the best can probably only lengthen life for a period, and may shorten it materially without affording much prospect or possibility of cure. On the other hand, the chance of shortening life by a little may be legitimately taken when a cure is practically sure if the case turns out to be successful from an operative point of view. In all cases of this type the point of paramount importance is the realisation that the primary object is to save life and not necessarily to perform an ideal

operation. I strongly suspect that more than one life has been sacrificed by proceeding to the completion of an academic operation which might have been saved by the performance of a less serious proceeding in the first instance. This observation, although it applies generally to a number of cases, such, for example, as extensive disease about the neck and throat, rectum, and other parts, seems to me to have especial force in connection with many of the large growths revealed by abdominal exploration, the risk of removal of which is generally altogether out of proportion to the benefit likely to be derived from the treatment, the mortality in such cases being high, whilst not a few really show no lethal tendency if the disease is left *in situ* after free exposure, and in some the disease finally disappears. Having regard to all the circumstances in cases of this type it appears to me that in the vast majority the proceeding to the extirpation of masses of disease which entails, for example, the taking away of large portions of the great blood vessels or other vital parts is rather an academical demonstration of the possibility of removing a growth than a treatment for the benefit of the patient, especially when it is remembered that, even with our present knowledge, it is practically impossible to determine whether a growth is malignant or whether it is not by any

other test than its clinical behaviour. The three following cases which have occurred in my practice within the past two years are sufficient to emphasise this fact.

Case 1.—A boy, 14 years of age, was found to have an apparently malignant growth of the right kidney and surrounding tissues. The vena cava was involved in the disease; many outlying nodules distinct from the main mass existed. One of these was removed and proved after examination to present microscopically all the characters of typical sarcoma. No attempt at removal was made. The whole disease disappeared and the boy is now in the navy.

Case 2.—A young woman, aged 28 years, had abdominal section performed with the view to the removal of a mass on the left side of the abdomen below the umbilicus which seemed to be connected with the uterus. Upon exposure a large, and so far as could be judged a typical, mass of malignant growth was seen involving the omentum and the uterus, lapping around the left iliac vein and artery, with which it seemed to be inseparably connected. Secondary nodules in large numbers were scattered in the omentum in the immediate neighbourhood. No attempt at removal was made. The whole disease has apparently disappeared and the patient is in good health.

Case 3.—An abdominal section was made with a view to the removal of a tumour apparently involving the cæcum in a man, aged 48 years. The mass which involved the cæcum, as was expected, had the appearance of malignant disease; it was fixed and extended inwards by a flattened process to the middle line. In this the vena cava was imbedded. No evidence of obstruction had

occurred and as the active growth appeared to be in a direction away from the bowel nothing further was done. It is now some months since the operation; the mass is smaller and is steadily decreasing, while the general health of the patient is continuously improving.

I have no doubt that in each of these cases the removal of the disease was mechanically possible, but it is hardly likely that all the patients would be alive now if the completion of ideal operations had been effected.

I mention these cases not because they indicate that completion of ideal operations should not under proper conditions be effected, but because they show clearly enough that even when operation is in progress the result of a case may depend upon much more than the dictates of mere craftsmanship. A more striking instance, perhaps, than any one of these was the case of a nurse who became a patient in St. George's Hospital on account of hæmatemesis in whose abdomen a large mass could be felt which proved, as was believed before laparotomy to be connected with the stomach. It had upon exposure all the appearances of a large carcinomatous plate involving two-thirds of the anterior and under surface of the organ towards the pyloric end which was involved in the disease and was also adherent to a mass of glands which lay beneath it. The case occurred at about the time when the complete removal of the stomach was under discussion and

I should, if the patient's condition had offered any hope of real success, have removed the greater part of the organ here. As it was, nothing was done; the mass disappeared and the patient resumed her work. I mention this case as it provides an excuse for referring to a remarkable difference existing in the experience of surgeons in malignant, or what seems to be malignant, disease of the pylorus and the parts continuous with it. It happens that my experience of the surgery of the stomach is large, but in all my dealings I have only met with three cases in which I have thought pylorectomy worth performing. The other cases have either been too advanced to justify the treatment or of too doubtful a nature to lead me to think it proper. All these doubtful cases have been treated by gastro-enterostomy, with uniformly good results. In a very striking case, in which several of those present were convinced of the malignancy of the disease, upon which I operated by gastro-enterostomy in 1887, the first case of the kind at St. George's Hospital, the man is alive now and following the occupation of a waiter. Seeing the large number of pylorectomies published by other surgeons in different parts of England, it is clear that either my practice differs altogether from theirs, or that the cases which come in their sphere of action are of

a different kind from those with which I meet. However this may be, I am content with the result of my own experience, which emphasises the truth of a dictum for which I have a profound respect, and which could be illustrated by endless cases—namely, that when an equally good result is obtainable by two operations, one being distinctly less dangerous than the other, the best practice is to choose the milder method, although for the moment it may appear less brilliant in itself and perhaps less obvious in its immediate result.

Some Effects of Familiarity with Operations upon Their Use.

The effects of familiarity with operations in leading to their adoption in a manner which one cannot help feeling is not always quite discriminating, are best seen in connection with the operative treatment of certain conditions which are dealt with radically, either from the point of view of pure expediency or for preventive purposes—conditions, in fact, in which operation cannot be regarded as actually necessary and in which the proper application of the treatment must therefore depend entirely upon the judgment and experience of the surgeon concerned, the justification for an

operation being principally its safety and a certainty, or, at all events, the strongest possible probability of the desired result being assured. In many of such cases it cannot, I think, be denied that the operative treatment has with some of us degenerated—I use the word advisedly—into a mere question of routine. And it may be said without reservation that if a treatment becomes a routine method, the danger of suppression of individual judgment in connection with it becomes a reality. For the better understanding of this contention, although many other illustrations could be offered, it is convenient to consider only two conditions which must be more than familiar to all of us—that is to say, disease of the appendix and varix. The removal of the appendix after the occurrence, or recurrence, of certain symptoms may, I presume, without exaggeration be described as a routine practice now with many surgeons. At the same time, it cannot be contended that the removal of the appendix is always called for or that it invariably relieves the symptoms for which the operation has been performed. For the proper application of a treatment which may itself cause death (fatal results do sometimes follow the operation of removal of the appendix even in the quiescent stage), may not relieve the symptoms

for which it has been carried out, and is sometimes followed by grave complications, such as, for example, extensive thrombosis, must clearly demand an amount of judgment in its application which is altogether incompatible with mere routine. Further, in relation to this matter generally, it seems to me that the habit of frequently operating in any given condition tends automatically to an inclination to over-estimate its gravity. It is, for example, by no means certain that the lethal tendency of recurrent appendicitis is as great as we have come to suppose. Many people live the ordinary span of life without operation who have been the subjects of frequently recurring attacks of appendicitis—a statement which receives considerable interest from the fact that it would be easy to indicate persons in the medical profession who, whilst they are the subjects of recurrent appendicitis, show no great anxiety for operation.

I have said that the removal of the appendix does not always immediately do away with the symptoms for which the operation had been performed. The defective result in these cases depends, it seems, upon the serious implication of the cæcum itself in the disease. It is not so uncommon as is generally supposed for recurrent attacks of symptoms indistinguishable from those which occurred

before the removal of the appendix to follow after the operation, either immediately or after an interval, in cases in which the original attacks have followed upon malaria, dysentery, or typhoid fever, the explanation probably being that in such cases the disease is liable to be cæcal in its origin. There have come under my notice a considerable number of cases in which the appendix has been removed for the ordinary symptoms of appendicitis so-called, in which symptoms indistinguishable from what is commonly called appendicitis followed after the operation. It is true that after repeated subsequent attacks the symptoms gradually wore themselves out, but so they might have done in the absence of operation altogether. During the late South African war I had a considerable experience of operations in cases of appendicitis in men invalided on that account, and of these, three cases in which symptoms arose after dysentery and malaria showed no immediate improvement at all after the operation. In each of these cases the cæcum was at the time of operation seen to be the main seat of disease, the appendix in each, although it could hardly be called normal, was so slightly involved that no stretch of imagination could have saddled it with the cause of the symptoms, and my impression is that in the light of subsequent knowledge these cases would have

been as well without operation as with it. It would therefore seem that it might be worth the expenditure of some pains and some time in endeavouring to arrive at a diagnosis without operation between cases in which the cæcum is the original seat of disease and those in which the appendix is primarily at fault, an observation having a practical bearing to which I shall refer for another purpose a little later.

Illustrations of a less debateable kind of the point I have just now in view may be afforded by cases which in themselves have no lethal tendency at all; such, for example, as uncomplicated varix of the lower limbs, which provides a large number of operations at the present time. I know of few conditions which require the exercise of more judgment in arriving at a proper decision as to the desirability of operation than these cases of varix do. The number in which operation is really beneficial is very small in comparison with the number of cases met with; moreover, the size of the veins bears no relation to the necessity for operation, inasmuch as in many of the cases in which the veins are largest, operation is altogether unnecessary, and indeed often unjustifiable, mere abnormality having to be distinguished from disease. Setting aside, therefore, such patients as come up for treatment to

satisfy the requirements of the public services, the cases of this class in which operation is really indicated are few, save those in which objective trouble, such as pain or rapid increase in size, is present.

Now, the operation for varix in sound subjects between the ages of 18 and 45 years may be regarded to be as safe as any operation can be, and need not therefore in itself be regarded seriously—a fact which, I cannot help feeling, leads to the performance of operations in a certain number of cases of this kind which would not be so treated if the risk of the proceeding were sufficient to lead to a more careful consideration of the bearings of the matter. That this is so, I am compelled to conclude by the fact that cases come under observation in which operations upon varix of the lower limbs have been carried out for the relief of symptoms undoubtedly due to flat-foot which were subsequently relieved by the ordinary treatment for that affection. And cases from time to time come under notice in which pains resulting from nervous disease have been apparently assumed to be due to extensive varix, which has consequently been operated upon with a view to the radical cure—an error of judgment which might have been avoided if the patellar reflex had been tested. Had the treatment here been of a more dangerous kind I have no doubt

that a sufficiently thorough examination would have been made to prevent the performance of operations which were certainly unnecessary. It would, if time allowed, be easy to give further illustrations of this kind. There is, in fact, little doubt that the virtual absence of risk to life in connection with the less severe operations at present extensively carried out, sometimes leads to their being adopted without the consideration which they really deserve.

The Safety of Operations in Relation to their Performance in Certain Cases.

Going a point further I think it clear that the mere safety of an operation tends to obscure the fact that its results may not be invariably advantageous to the patient, a view which could be supported by fertile examples, which would show that in cases in which the condition before operation had given rise to little or no trouble, and in which, in fact, the radical treatment had been carried out for purely expedient or preventive purposes, the consequences following are sometimes regrettable. The percentage of cases in which unsatisfactory results follow is, of course, impossible to ascertain, but the fact that such results do ensue is clear, because I see in the course of my experience—which

I suppose cannot be very different from that of other surgeons—cases in which operations performed by various surgeons are followed by such results. Taking varix again, for example, cases occur in which thrombosis, permanent cold extremity, chronic œdema, and acute neuralgia follow operation in people who previously had suffered no inconvenience at all. As a good example of this sort the last case of the kind which has come under notice is worthy of mention. The patient was a young girl of a highly sensitive temperament, who, being distressed about some varix in both lower limbs, contrived to have operative treatment upon the veins, which had previously given no trouble at all, carried out. Thrombosis in both limbs followed the operations, and now, months after the treatment, she is only just able to resume her ordinary vocation, and it remains to be seen whether further trouble will arise. It would, I presume, be foolish to contend that the operation would have been performed here if it had been thought that any risk to life was involved in its performance. An interesting point arises now in connection with the difficulty which sometimes presents itself to an operator in determining whether an operation is finally successful or not, because it is quite certain that a large percentage of those patients whose operations prove in the end

unsatisfactory do not return for advice to the surgeon who originally operated; and I have reason to know that instances happen in which the original operator has considered, and sometimes, indeed, in perfect good faith has recorded a case as successful which has been under the care of another surgeon subsequently either for further operation or in consequence of unfavourable results following upon the original treatment.

It is only a short time since that I heard, quite by chance, that a patient upon whom I had operated, as I thought, successfully, had been treated subsequently by another surgeon for the same condition, presumably because my operation had failed to effect the object desired. And I have lately seen a patient who has already been operated upon for the same lesion by two surgeons, each of whom is, I believe, under the belief that the operation performed by him has been successful. Indeed, in this respect there is little doubt that many of us live in something like a fool's paradise, a fact which, in the study of statistics, is not to be regarded altogether with complaisance. It is, at all events, quite certain that the true value of a treatment cannot be estimated upon records of successful cases and it is a welcome and healthy sign when a distinguished surgeon, as happened a short time since, thinks it right to pub-

lish a series of unsuccessful results following upon operations of which he has had a large experience. In connection with this question it is, I suppose, superfluous to insist that a successful operation should be held to mean one which achieves the end for which it is performed, whether that be the saving of life, the relief of pain, or any other object. The description of successful operations followed by the death of the patient has been fully satirised by Dickens and others before him, and the matter would not be worth mentioning here were it not that apparently serious mention is sometimes made of cases in which successful operations have been performed without the saving of life or attaining some other end which was the real object of their performance. The use of the term "successful" in connection with operations in such circumstances seems to me to be a juggling with words which is not quite consistent with the traditions of our profession, and that it should be so used is, I think, further evidence of the way in which the overwhelming importance now attached to operations themselves tends to obscure the more vital points at issue and sometimes, it must be admitted, goes dangerously near to leaving in the background the great truth that in all matters of this kind the interests of the patient and not the mere attaining

of a mechanical achievement should be the surgeon's first concern.

The Exploratory Operation.

The results of the free employment of the exploratory operation have, on the whole, been greatly to the advantage of the patient and of the surgeon alike, but, as is the case with many other things, an exploratory operation is not always perfect in its results and, moreover, it cannot be regarded as altogether free from risk. It is sometimes said when discussing the propriety of making an exploratory operation that at all events no harm can come of it if no particular advantage is gained. But is this always the case? I find that within a comparatively short time I have been brought in contact with no less than 16 cases in which persistent troubles—arising, it has been said, after abdominal exploration—have been complained of. Ten of these came under observation on account of troubles connected apparently with the operation. In the others the fact of an exploration having been performed was only discovered accidentally in the course of conversation or in the course of examinations made in connection with matters apparently unassociated with it. In five of these cases large ventral herniæ

existed; in three cases persistent pain of an acute kind had followed about the region of the wound; in two there were sinuses; four patients had never been the same since the operation; one had continual incontinence of urine; and one had an ankylosed hip, which was stated to have followed upon fever which came on after the operation. Fatal cases are also, I believe, not unheard of. I have already said in another connection that results like these in no respect negative the propriety of the exploratory operation as such, but only show that it cannot be regarded always as a trivial proceeding and that it should therefore be undertaken only when it is really necessary and not merely as a routine proceeding. Although the instances of defective results which I have mentioned are confined to the abdomen it would be easy to afford other examples, notably in the case of the knee. In one respect, at all events, it is certain that the very free use of the exploratory operation does not make for the good of surgery. It cannot, I think, be denied that, speaking generally, the estimation in which the art of clinical diagnosis—by which I mean bedside diagnosis as distinguished from that of the operating theatre and the clinical laboratory—is held has declined since the free use of the exploratory operation. This must be a patent fact to any

acute observer of surgical affairs generally and it must be especially clear to those who are concerned in examining candidates for the various degrees and diplomas as they have exceptional facilities for judging of the trend of clinical teaching in the various medical schools. In former times, in consequence of the great risk generally involved in any but the simplest of operations, and sometimes even in them, it was essential to strain every faculty of observation to endeavour to arrive at a diagnosis before resorting to operation. Now, on the contrary, when the exploratory operation, which can, as a rule, be carried out with comparative safety, is an immediate means of clearing up a difficult diagnosis there is a disinclination to spend a great amount of time in arriving at a conclusion independently of operation which it is thought may be much more easily attained by exploration.

In some respects apart from any question of risk to life or other consequences, this condition of things is not advantageous and especially is this the case from the educational point of view, for although, as I have said, the exploratory operation may often be a proper resource in the hands of those sufficiently experienced to appreciate its limitations, to the inexperienced and to the ordinary student its too common use is distinctly harmful, as it frequently

leads to any careful attempt to make a non-operative diagnosis being regarded as a waste of time; and moreover, it sadly depreciates in the minds of the same persons the inestimable value of the education of the eye and hand which is essential for the highly cultured practitioner, and which nothing affords so certain a means of obtaining as the delicate and gentle manipulations which should be inseparably connected with bedside diagnosis. Further, this effect of lowering the standard of bedside diagnosis tends too much, in my opinion, not only to exaggerate the importance of the purely operation aspect of surgery, but to reduce the surgeon to the position of the henchman of the physician, into whose hands the more delicate non-operative diagnosis must, as a matter of course, fall. I am not one of those who think that the present incidence of surgery is to the extermination of the physician; in fact, I believe he will become more and more essential as time goes by. At the same time I am strongly of opinion that it is not the duty of the surgeon to operate at the request of a physician unless he first assures himself that the conditions said to exist are actually present. To do so, it seems to me, is to lose sight of the respect which is due to surgery in the broadest sense. But it is clear that this ideal surgical position is only possible with those who have culti-

vated to the utmost the power of non-operative diagnosis. The surgeon is in this respect, in my opinion, a physician, and something more. Be this as it may, I feel strongly that the performance of the exploratory operation as a mere routine treatment is to be regarded with apprehension, since it tends to the idea that the most careful attempts at arriving at a diagnosis without operation are unnecessary, and so conduces to minimising the value of the cultivation of judgment in surgery —a deplorable thing, since judgment is the enemy of routine and routine is the bane of surgery. The exercise of the highest degree of astuteness in diagnosis is, indeed, often necessary before determining upon an exploratory operation. Operations, for example, upon the abdomen when the lesion has been in the thorax are not unknown. It is only a short time since that I was called to a case with a view to operating for ruptured gut after a severe injury, in which it was only possible, upon the most careful examination, to determine without operation that the lesion was thoracic and not abdominal, a conclusion which not only negatived the propriety of operating, but probably saved the patient's life, as an abdominal exploration in the degree of collapse which was present must have almost certainly ended in death.

Some Effects of Operations upon Hospital Work; Methods of Operating; and the Attitude of the Public.

The effect of the tendency to regard operations as the main end of surgery has led to a complete change in the course of the last 20 years or thereabouts in the class of cases admitted into the surgical wards of the large hospitals of London, so much so that I believe that I am right in saying that, with the exception of accidents, the admission of patients in the ordinary way whose diseases do not offer a prospect of cure by operation is comparatively uncommon. All possible credit having been allowed to the extensive applicability of the operative treatment, I think that the exclusion of cases unsuitable for operation inflicts a hardship upon many patients and is bad for medical education generally. It would be interesting to know what becomes now of cases which were formerly admitted as a matter of course into the general hospitals, such as early tuberculous disease of joints, diseases of the spine, and many other conditions in which operation is not likely to be called for. It is at all events quite certain that there is no very great opportunity for the study in the surgical wards of the majority of our hospitals of cases which are outside the

sphere of probable operation; and I am strongly of opinion that in every hospital a definite number of beds should be set aside for the exclusive benefit of patients suffering from conditions which, whilst curable, are not necessarily so by operation only.

An interesting matter in connection with the details of operations themselves is the ignorance of the majority of us as to the methods used by other surgeons. This is the result of our seeing little or nothing of each other's work. That this should be so cannot be otherwise than unfortunate, although it is difficult to see the remedy in these times of rush and overwork. I am, however, sure that if we could each of us devote a certain time to watching the way in which operations are conducted by others educated in a different school we should all obtain a wider grasp of methods generally, greatly to the gain of surgery and to our own advantage. As it is, each man learns by experience the method by which he can himself most surely achieve in any given case the desired end; the methods of each surgeon, in fact, gradually become stereotyped, which in some instances, unless I am deceived in my impressions leads to some intolerance with regard to the practice of others, since there is an inclination sometimes on the part of a surgeon to regard operations performed by any method other than his own as inefficient or

unsuitable, failing to realise, by reason of his insulation, that what he can effect by one plan another operator can do as well, or perhaps better, by some other method. The greatest evil, however, of this condition of things is the fostering of routine operations in consequence of the assumption by some people, because they have no means of checking the view that for a given condition only one operation is really effective, that being, of course, the one they are in the habit of using themselves, a position which rarely, if ever, bears the test of actual work. In suturing the abdominal wall, for example, there are three main methods, each of which is used exclusively by different surgeons because they have come to think that only one is a perfect plan; yet there have come recently under my notice examples of large ventral herniæ following the use of each of these methods, two examples being in the same patient. Endless other examples could, if it were necessary, be quoted. To illustrate the same point, it is stated that sometimes there is only one efficient operation for piles—namely, the removal of the whole pile-bearing area. Although this may be so in the hands of some, it certainly is not the case with the majority of us.

It is, I believe, safe to say that one of the most remarkable of psychological problems at the present

time is the attitude of the public generally towards surgical operations, a problem offering difficulties in its solution second only to those presented by the mystery of radium, for whilst in the majority of instances the dread felt in connection with the truly necessary operation is so great that it is, I believe, a factor to be reckoned with in deciding upon operations of this kind unless a successful result is practically certain, in cases of expediency and unnecessary operations it is sometimes, unless my experience differs from that of other surgeons, extremely difficult to make people believe that operation is not altogether desirable. It is, in fact, at times not a question of advising an operation, but of declining to accede to a request for its performance. The reason for such a curious state of affairs is difficult to explain. Whatever the explanation may be there is no doubt that a heavy responsibility falls upon the surgeon in the matter, which is considerably increased by the fact that it indicates such absolute confidence in the integrity of the medical profession. The truth, I suppose, is that the public have an altogether exalted idea of what can really be effected by operation and have only the vaguest idea of what an operation really means. In respect to this attitude it cannot be too fully understood that no amount of anxiety on the

part of the person to undergo an operation can relieve the surgeon of one atom of his responsibility in regard to its result—a point which, I fancy, is not always quite sufficiently considered.

In connection with cases of this sort an interesting ethical point may arise. It sometimes happens that a patient who is determined upon an operation will, in the event of a request for its performance being refused, deliberately say that it is his intention to have it done, and that the services of some other surgeon must, therefore, be sought. Does this attitude on the patient's part justify the surgeon originally consulted in reconsidering his position with a view to performing the operation? The answer to this question is, I think, emphatically *No.*

A Forecast and Conclusion.

Nothing that I have already said must be held to mean that I under-estimate the value of operations as such, for no one has a higher appreciation of the immense benefit which is derivable from them, and no one can be more ready, or, indeed, more anxious, to employ them in proper circumstances, but I admit that a feeling of apprehension arises in my mind when I regard the inclination, which undoubtedly exists at present, to consider

the operative treatment as the Alpha and Omega of surgery, an attitude which must not only, as has already been said, end in the reduction of the surgeon to the grade of a mere mechanic, from which he is as far removed as a highly sentient human machine can be from an automaton, but distinctly, in my judgment, stands in the way of progress to better things. It behoves us, and it behoves us well, to bear in mind a fact to which allusion is less frequently made now than formerly —that operations, however perfect in themselves and in their results, are, excepting those rendered necessary by injury, and in some cases of deformity and senile change, in truth a reproach to us as a profession, inasmuch as they afford clear evidence of our failure, even at the present time, to obviate the occurrence of the diseases and the conditions which render operation necessary. By allowing the influence of the operative treatment to be too great, it seems to me that there is more and more danger of the great importance of preventive measures against disease being lost sight of. In fact, the conception and carrying out of a great operation are liable to conceal the importance of the initial defect which leads to the necessity for its performance. May I give a gross and commonplace example to illustrate clearly what

I mean? Cancer of the tongue, setting aside any question as to what may be the factor in the origin of cancer itself, is undoubtedly set alight by one or more of the many irritations, most of them preventible, to which the organ is constantly exposed. But how much time and trouble are taken in preventing these local causes? In other words, how much thought is given to the preventive hygiene of the mouth compared with that which is expended upon the conception of elaborate operative measures for the removal of already existing cancer and upon a consideration of their effective application? The answer will be found to the question by a reference to the ordinary educational works on surgery. Cancer, tubercle and the results of venereal disease, of which cancer is of course sometimes one, provide a very large proportion of cases requiring operations. The prevention of tubercle or its treatment in the early stages will before long, there is reason to believe, eliminate the necessity for its treatment by operation, and although we at present grope in the dark with regard to cancer, the discovery of the secret of its origin, which is only a matter of time and may come at any moment, perhaps from a least expected quarter, will assuredly lead to its treatment by other means than operation. With increasing sense in the community at large it is to

be hoped that an antidote may be found to the sickly sentiment which stands in the way of the practical extirpation of venereal disease.

Apart from these considerations the means for the treatment of disease which tend to reduce the scope of mere operative measures are increasing. Of these the most potent is afforded by certain of the higher physical forces, which are slowly but surely encroaching upon the domain which has hitherto been subject solely to the rule of the surgeon. A comprehensive view of the matter generally as it stands justifies, I believe, a forecast that ere many decades have passed away the operating surgeon as we know him will be a far less imposing figure in the medical landscape than he now is, and that operations, excepting in the restricted degree which I have mentioned, may perhaps be looked upon with as little favour as suppuration is regarded by us now. In the meantime, taking things as they are, it is well that we should beware lest a single predominant factor should be allowed to lead to our regarding through a small tube only a subject the horizon of which is absolutely unlimited. It has been said that the basis of surgery is handicraft, and this, in a sense, is true; but surely it is a truth only half told, for apart from the issues to which I have referred there is lying behind a far greater thing, the knowledge of when to apply

that craftsmanship of which everyone who now aspires to the practice of surgery should make himself a master. Nothing that has happened in the improvements connected with the practice of our art justifies, so far as I know, the modification by one iota of the edict of the great surgeon who, before advancing science had robbed operations of most of their horror, said, "The all-important thing is not the skill with which you use the knife, but the judgment with which you discern whether its employment is necessary or not." In other words, those who attach supreme importance to mere mechanical dexterity not only fail to reach the high-water mark of greatness, but entirely lose sight of the grand possibilities of their calling.

Gentlemen, I have done. Rousseau once said that people are happy in proportion first to their virtue and then to their independence. Being but poorly endowed with the former, such happiness as I have enjoyed has been mainly due to the latter thing. If, therefore, the spirit of independence has led me to express views to-night with which the feelings of any of those present are out of tune, I must crave indulgence upon the ground that my intentions have at least been good.